From: David Keith <dkeith@anchorqea.com>
Sent: Friday, June 12, 2015 6:45 PM
To: Miller, Garyg; Leos, Valmichael; Sanchez, Carlos
Cc: Dave Moreira (dmoreira@wm.com); Phil Slowiak; Wendell Mears; John Verduin; John Laplante; Holly Samaha
Subject: RE: SJRWP-photos of cap liner exposure 6/11/15
Attachments: 11June2015 Harris Co Incident_1535_150612.pdf

Hi Gary - As we discussed this morning, we went back through our construction reports and photos and also had Holly Samaha, an engineer out of our Houston Office inspect the area referred to and photographed by Bob Allen. Our findings are consistent with what I relayed to you verbally this morning: the area under question was a stockpile area during construction of the original cap, and during cap maintenance and enhancement activities, and it has several layers of armor and geotextile including the following:

1. Geotextile and aggregate were used to install a ramp into the western cell and also provide an area for armor stone stockpiling during construction
2. Second and third geotextile layers were installed below and above the geomembrane used in the western cell and all of these layers extended into the area of concern. An armored rock surface was placed over the area after installation of the geotextile and geomembrane layers
3. Finally, we had the contractor lap geotextile over the central and southern berms in the stockpile area (which is coincident with the area of concern) after the armor rock in item 2 above was placed. That final geotextile layer was also covered by the rock stockpile area. The purpose of that geotextile layer was to protect the geomembrane from any potential impacts of equipment working in the stockpile area during construction. The geotextile and armor rock that is remaining as the top layer in the area of concern has continued to function as the stockpile area for cap O&M activities.

The attached PDF file shows the area of concern and a sequence of construction photos with captions documenting the installation of the different geotextile layers and armor rock. What Mr. Allen observed was small patches of the final layer of geotextile that is underlain by at least two layers of armor rock, additional layers of geotextile, and a layer of geomembrane.

Based on our conversation this morning, I understand that you and Valmichael are planning on conducting a Site visit on early next week. Wendell Mears, one of our engineers that was involved in the design and construction of the cap is available to meet you there to go through any additional details and inspect the Site with you. Please let us know as soon as is practical what your final plans are and Wendell will arrange his trip based on your schedule.

Please don't hesitate to contact me if you would like to discuss anything.

Thank you,
David Keith

-----Original Message-----
From: Miller, Garyg [mailto:Miller.Garyg@epa.gov]
Sent: Thursday, June 11, 2015 4:51 PM
To: Valmichael Leos; Sanchez, Carlos
Cc: David Keith
Subject: FW: SJRWP-photos of cap liner exposure 6/11/15

9674069

Valmichael, Carlos,

FYI - just received these pictures from Harris County - they were at the site this morning for the site visit & found these areas of exposed geotextile; they appear to be small areas, but we should do an inspection as soon as possible with the PRPs to see if there are any additional areas & determine scope of repair work.

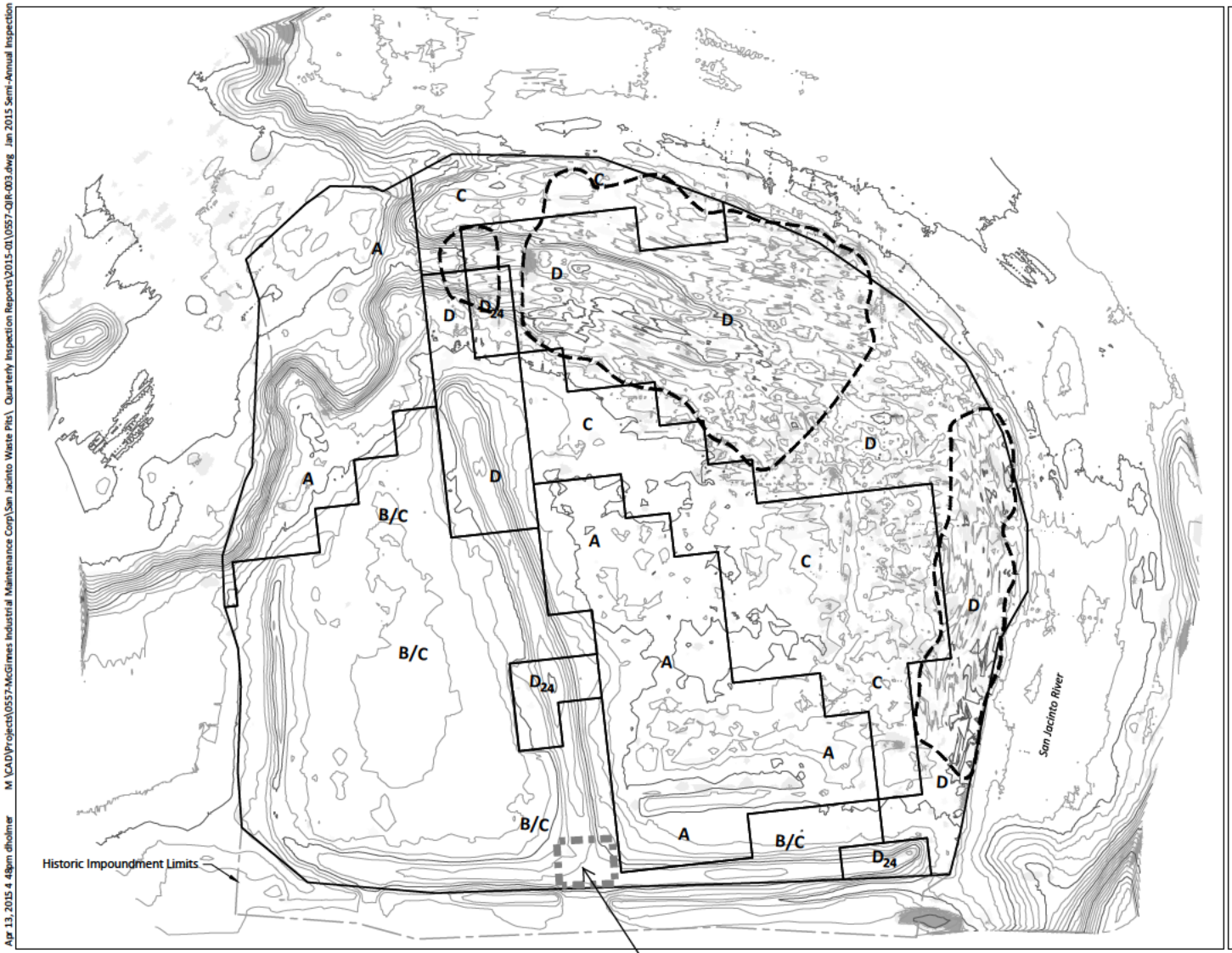
Thanks,

Gary Miller
EPA Remedial Project Manager
214-665-8318
miller.garyg@epa.gov

-----Original Message-----
From: Allen, Bob (PCS) [mailto:Bob.Allen@pcs.hctx.net]
Sent: Thursday, June 11, 2015 3:53 PM
To: Miller, Garyg
Subject: SJRWP-photos of cap liner exposure 6/11/15

Gary,
Pics of exposed cap liner taken by Pollution Control on 6/11/15. All three spots are in the same general area on the center berm near the site entrance marked with a blue milk crate.

BA



LEGEND:

- January 2015 Bathymetric and Topographic Contours (1 Foot Interval)
- Approximate Extent of April 2015 Survey
- B/C — Armored Cap Type and Boundary
- Historic Impoundment Limits
- > 1.0 Foot Increase
- 0 5 Foot Increase to 1.0 Foot Increase
- 0 5 Foot Increase to 0.5 Foot Decrease
- 0 5 Foot Decrease to 1.0 Foot Decrease
- > 1.0 Foot Decrease
- 30' x 30' — Example 30'x30' Area

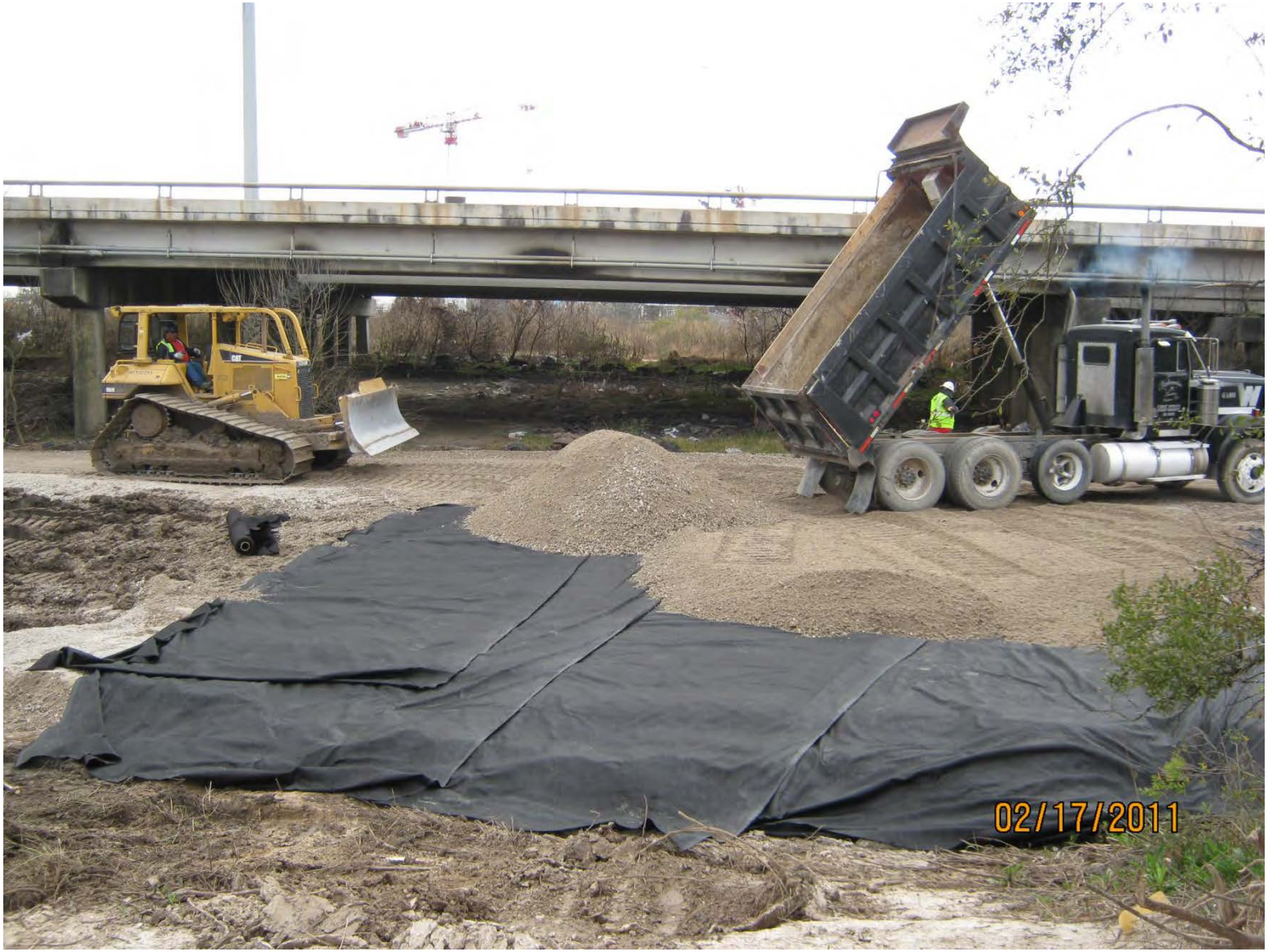
SOURCE: Drawing prepared from surveys provided by Hydrographic Consultants dated July 2014 and January 2015 and supplemented with additional survey data collected on April 8, 2015.
HORIZONTAL DATUM: Texas State Plane South Central, NAD83, U.S. Feet.
VERTICAL DATUM: NAVD 88.

0 120
Scale in Feet

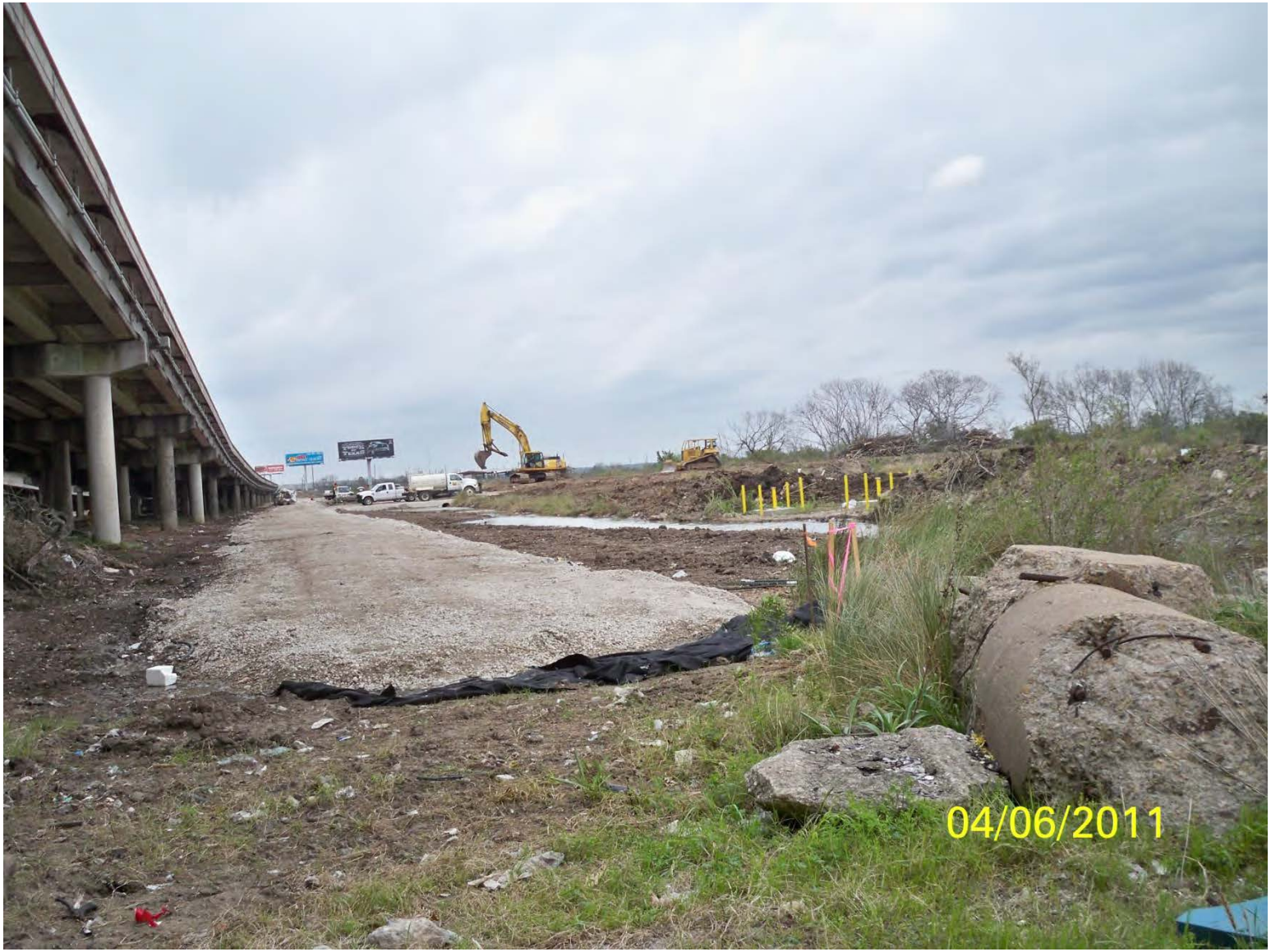
Area where Harris County Photos taken June 11, 2015. Ramp and stockpile area for TCRA construction

ANCHOR QEA

Figure 3
January 2015 Semi-Annual Inspection Survey
Post TCRA Semi-Annual Inspection (January 2015)
San Jacinto River Waste Pits Superfund Site



Constructing east ramp to stockpile area. Note multiple layers of geotextile are installed before crushed stone aggregate.



Working atop the stockpile area. Note geotextile under aggregate on the road.

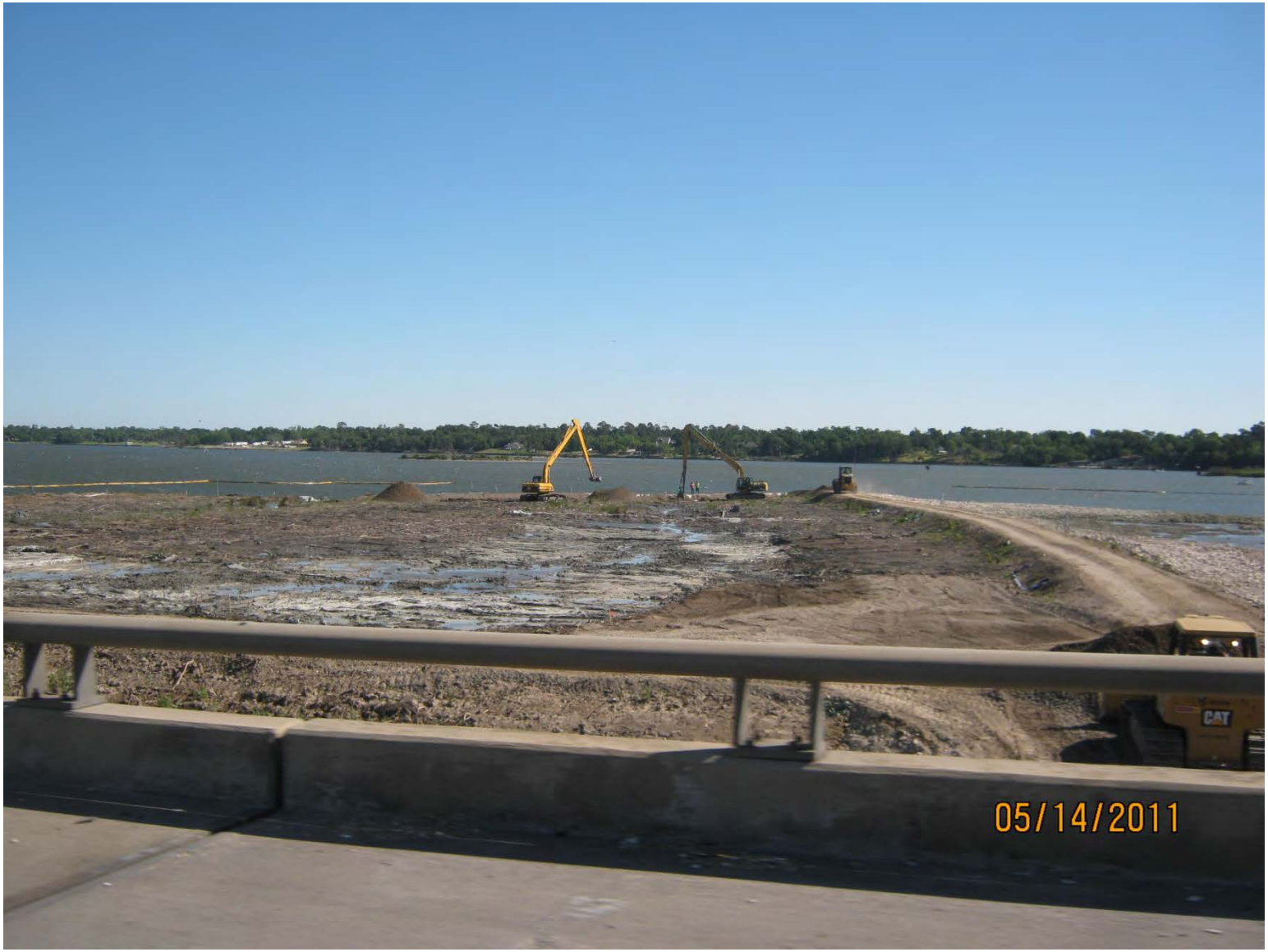
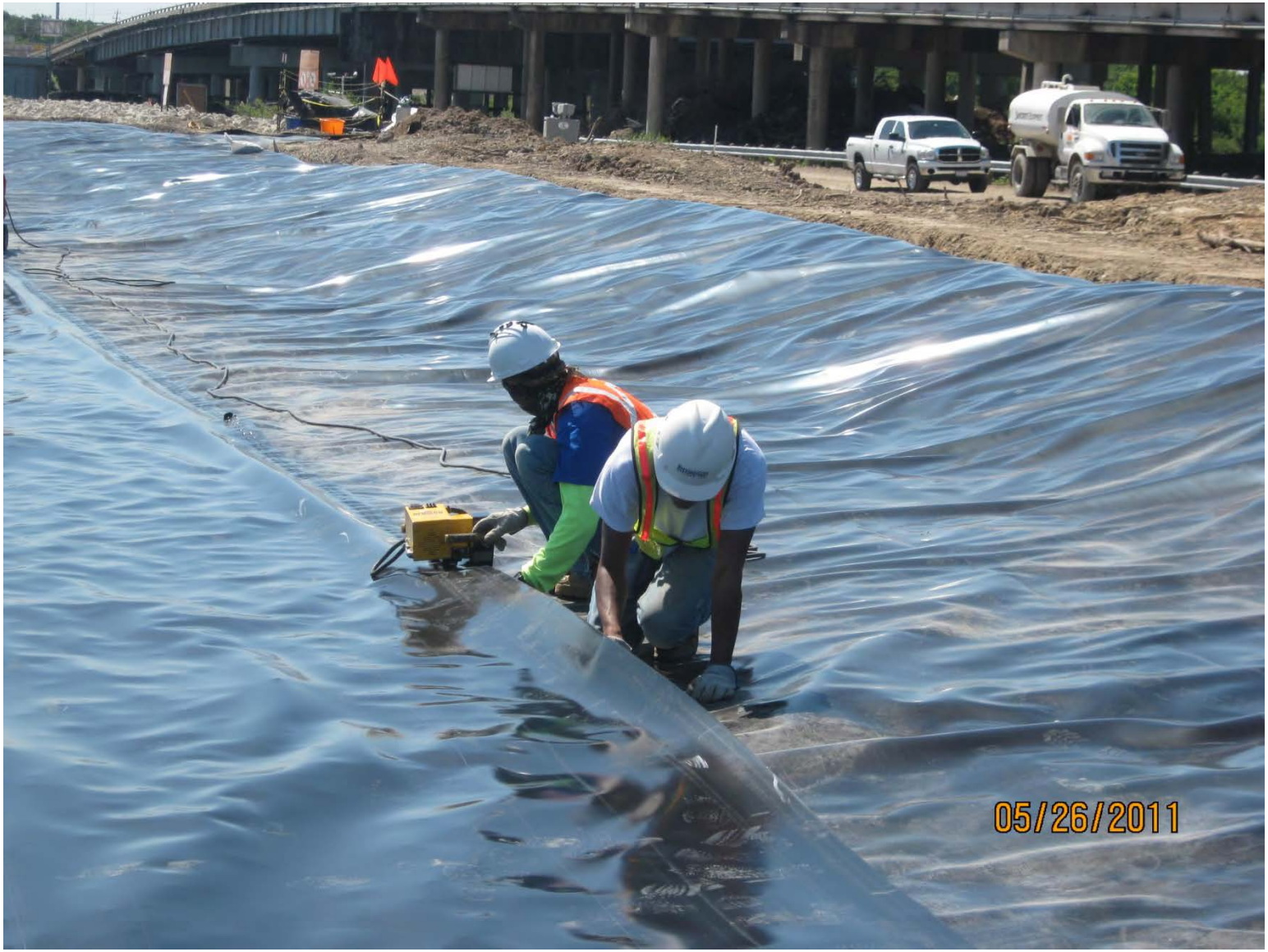
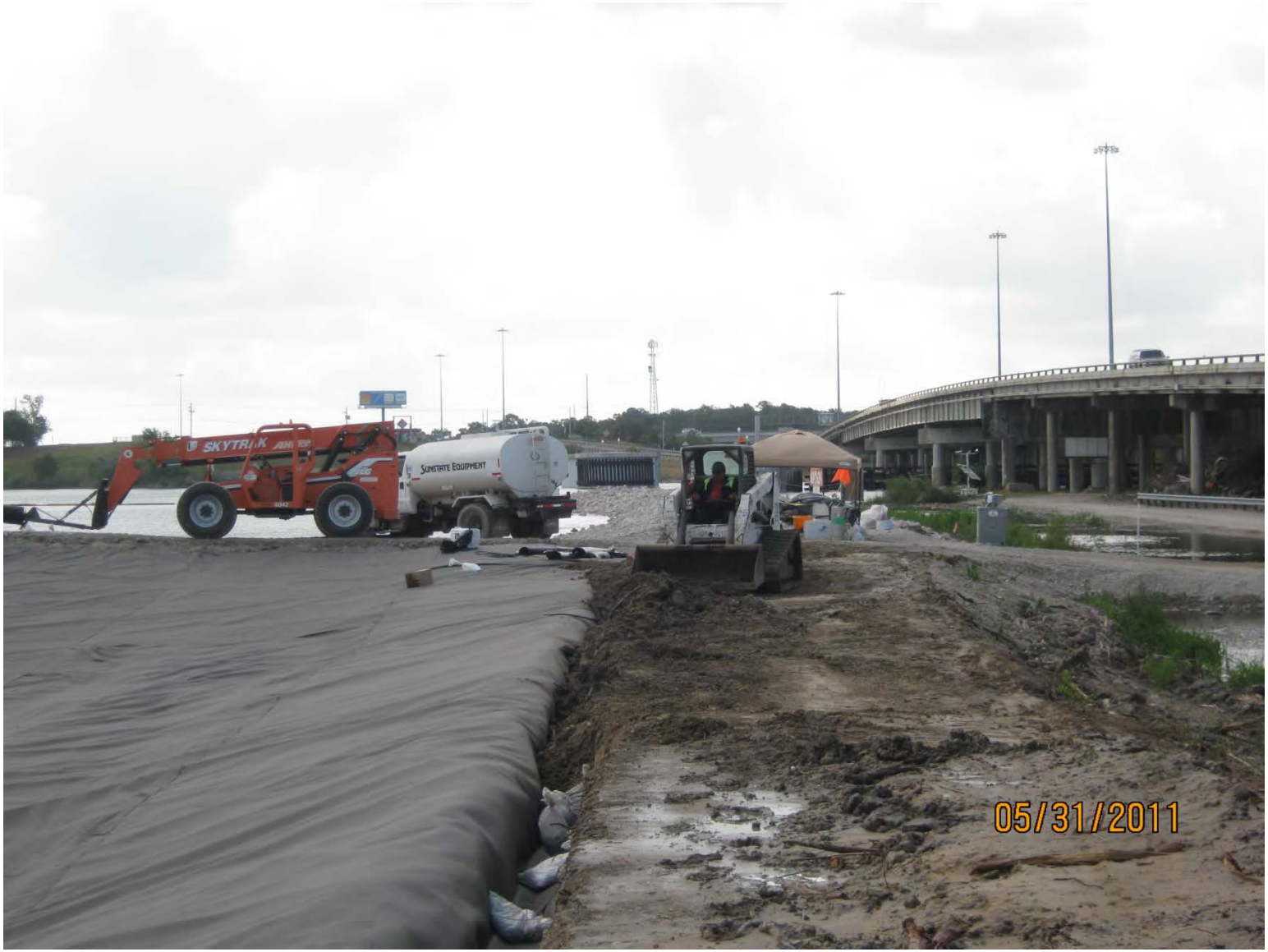


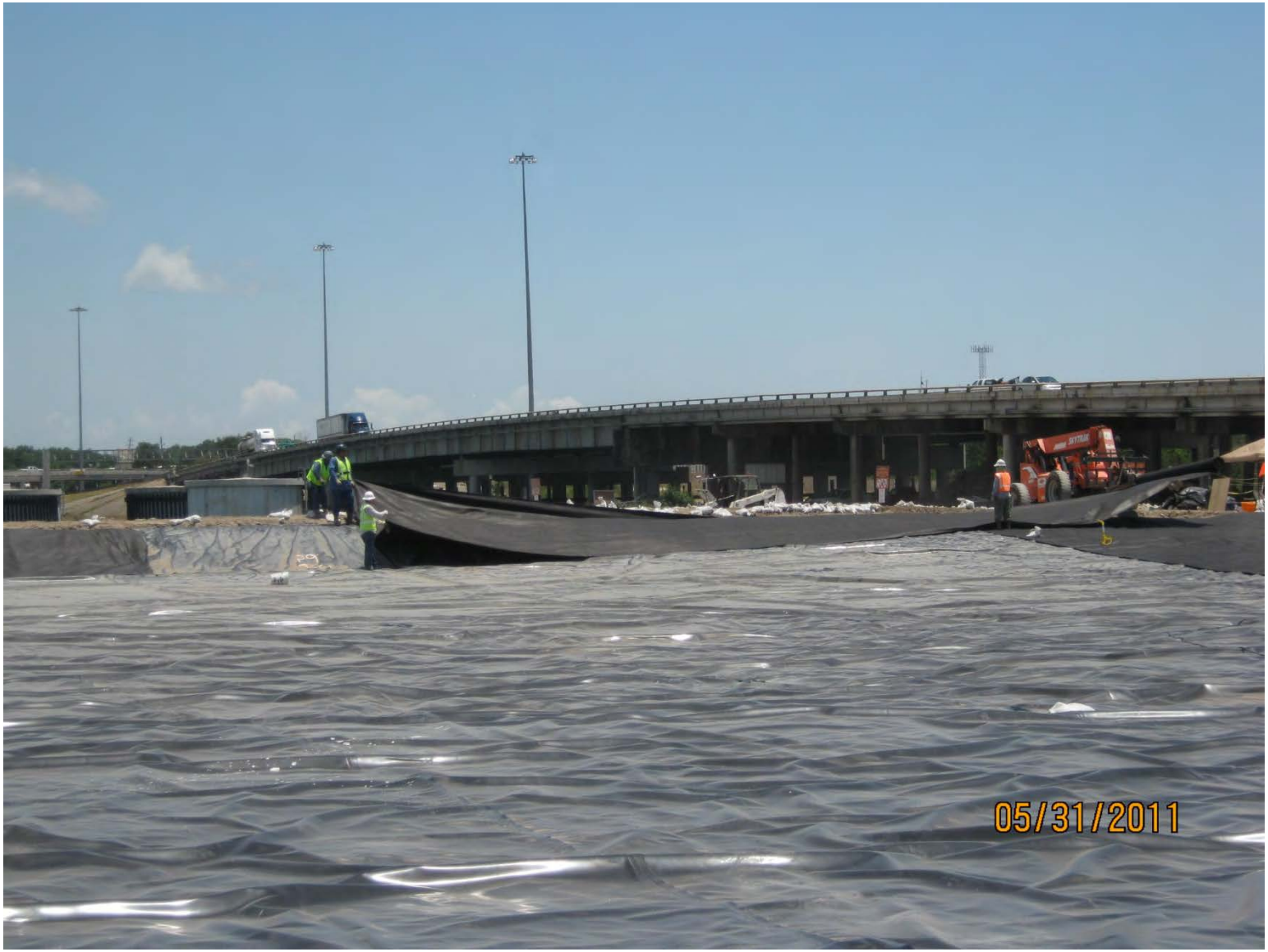
Photo from I-10 Bridge looking north along central berm. Note construction stockpile area aggregate and work pad installation



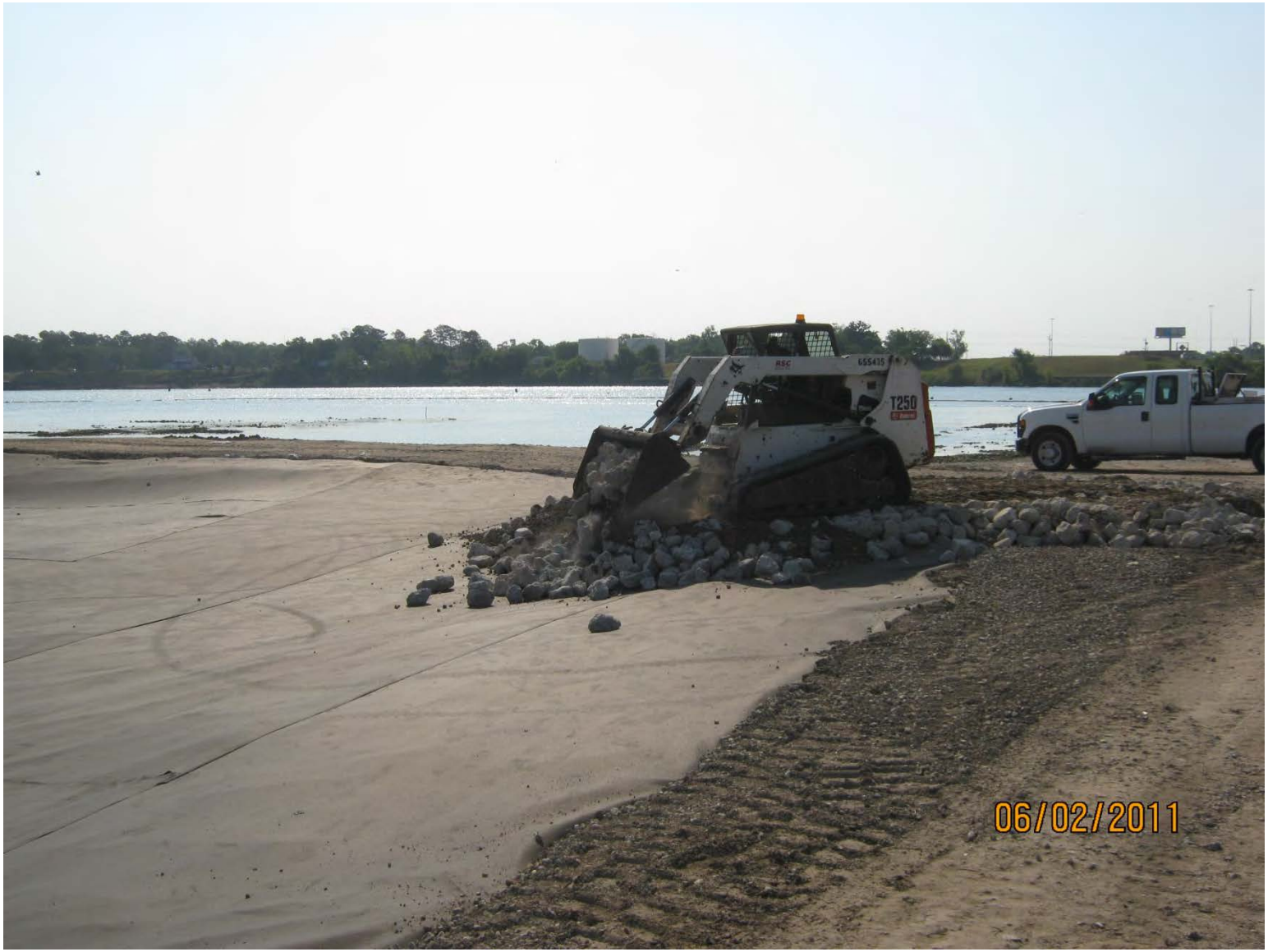
Seaming geomembrane. Looking east southeast at the intersection of the south and central berms and the stockpile area. Note geomembrane installed over a 12 ounce geotextile with edges buried in a trench.



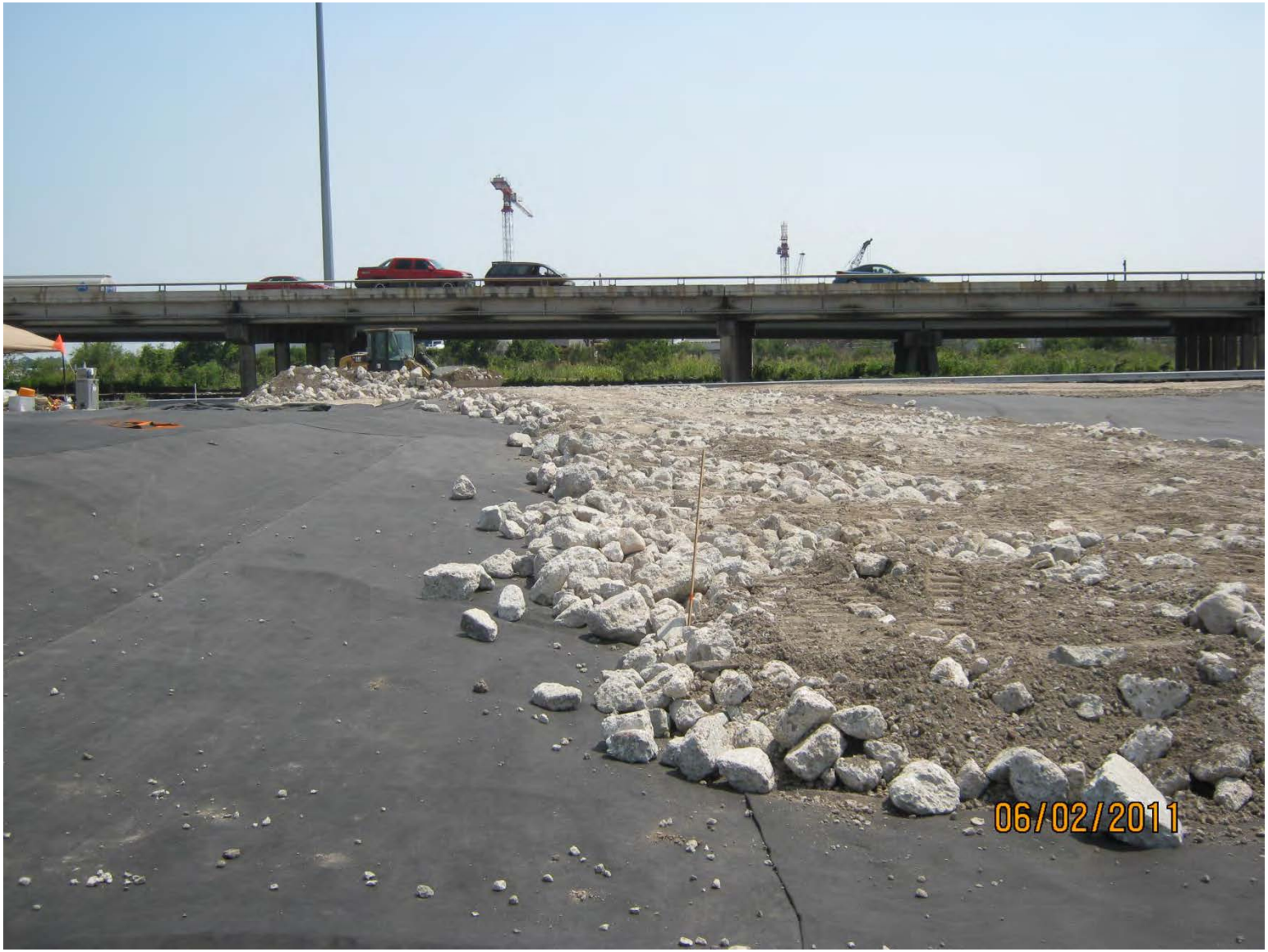
Standing atop south berm looking east at the stockpile area. Note fabric pulled into trench to anchor two layers of geotextile and geomembrane to the left and fabric fold to the right of the berm crest.



Protective cushion geotextile layer added over geomembrane. Looking southeast toward the stockpile area on the central berm.

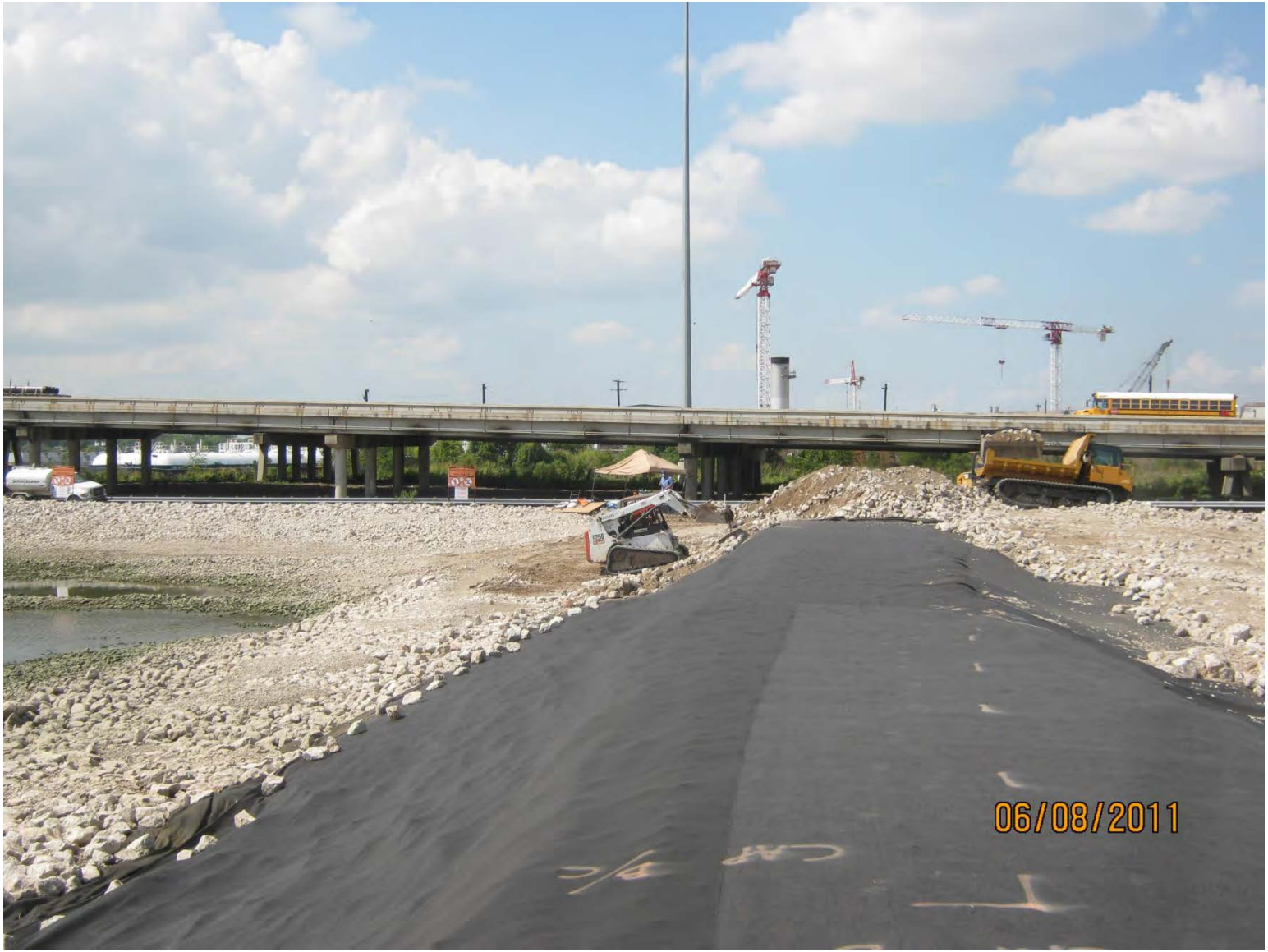


Stone placed atop second layer of geotextile at southeast corner of the western cell and the stockpile area. Note geomembrane trench.

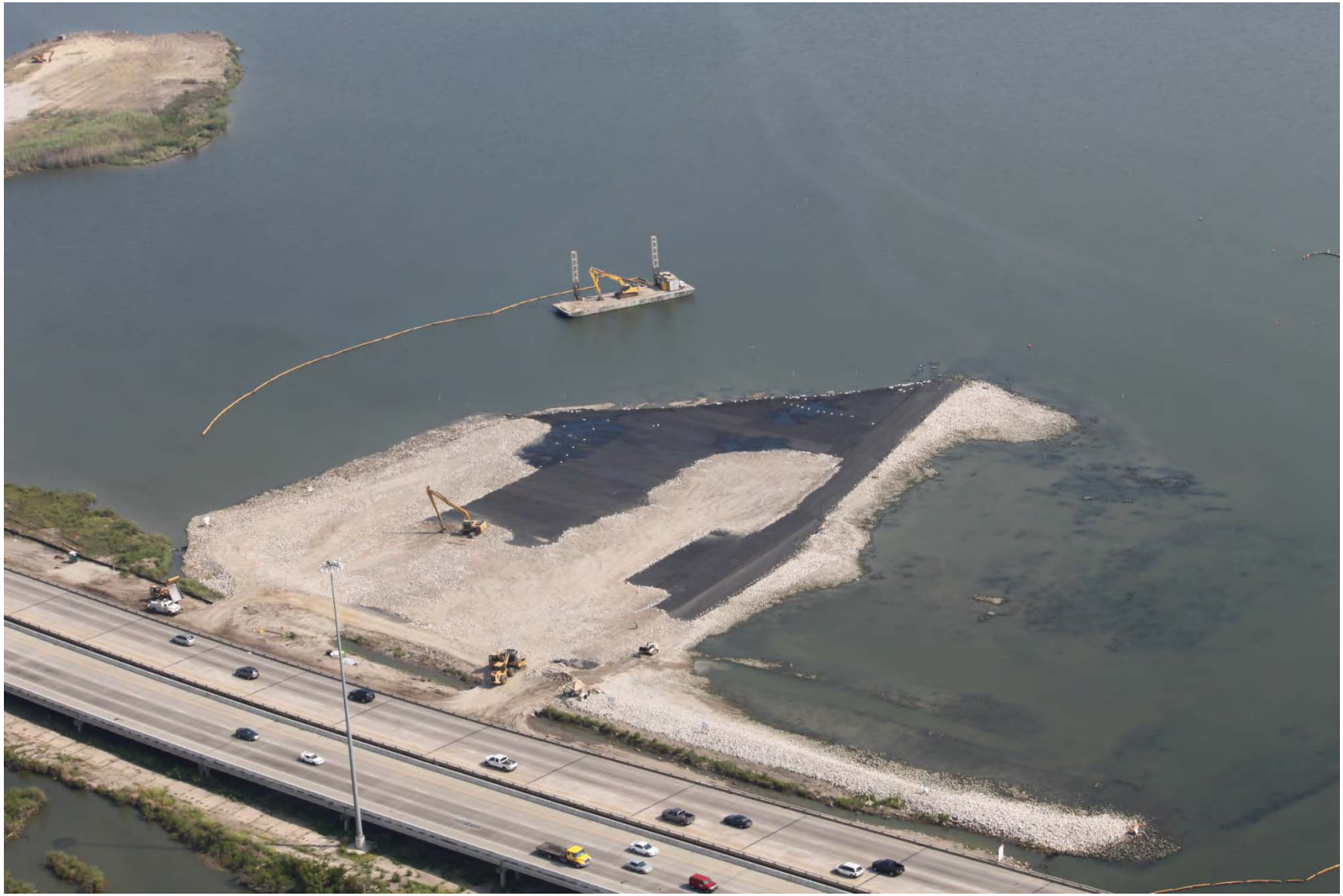


Armor stone being placed onto second layer of geotextile, looking south along central berm to the stockpile area.

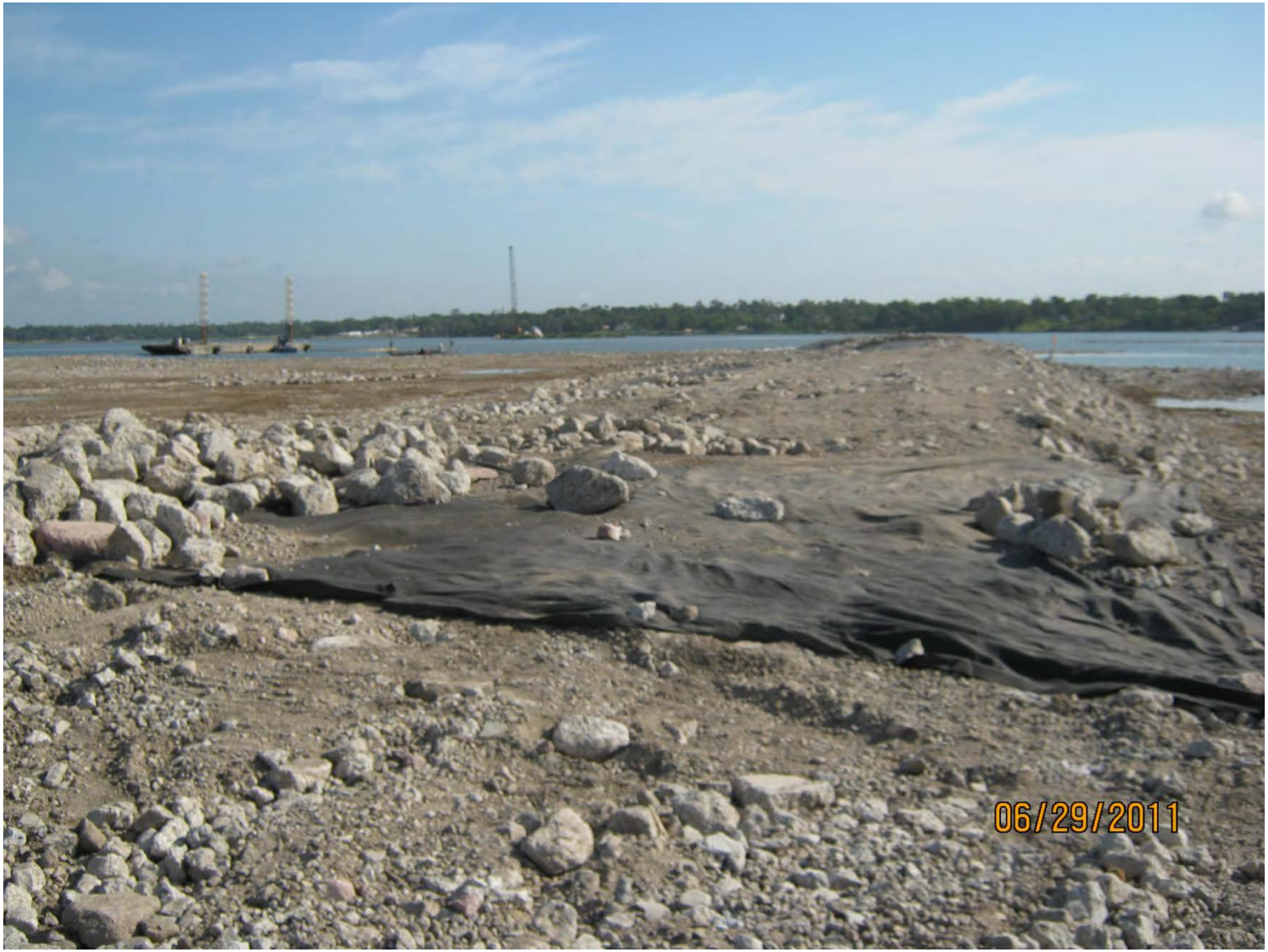
Excavator working from the stockpile area, placing armor stone on the second layer of geotextile. Photo looking south.



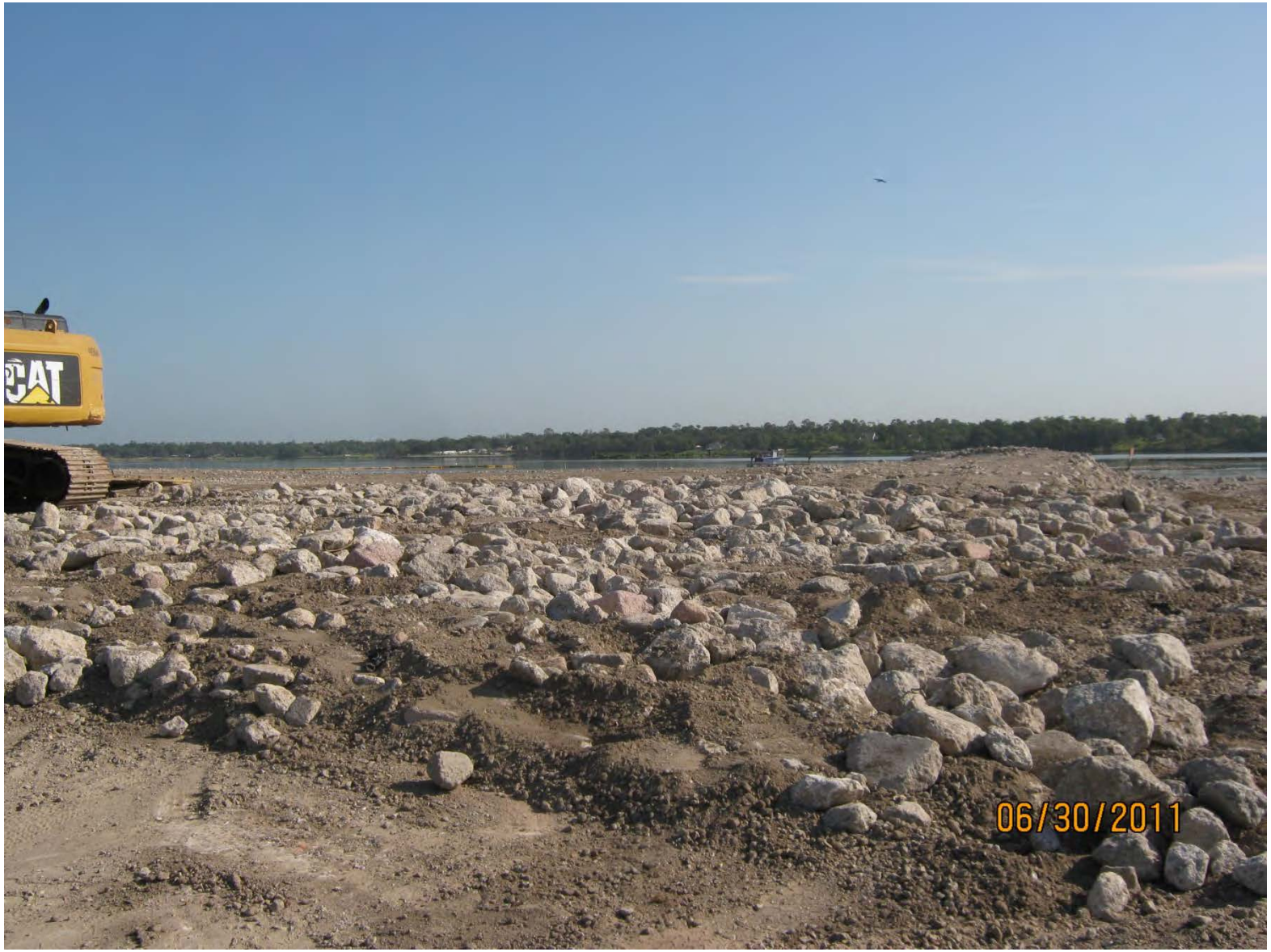
Geotextile and armor stone placed along central berm, look south toward the stockpile area.



Project aerial photo dated June 9, 2011. Note geotextile over the geomembrane and stockpile area at juncture of central and southern berms.



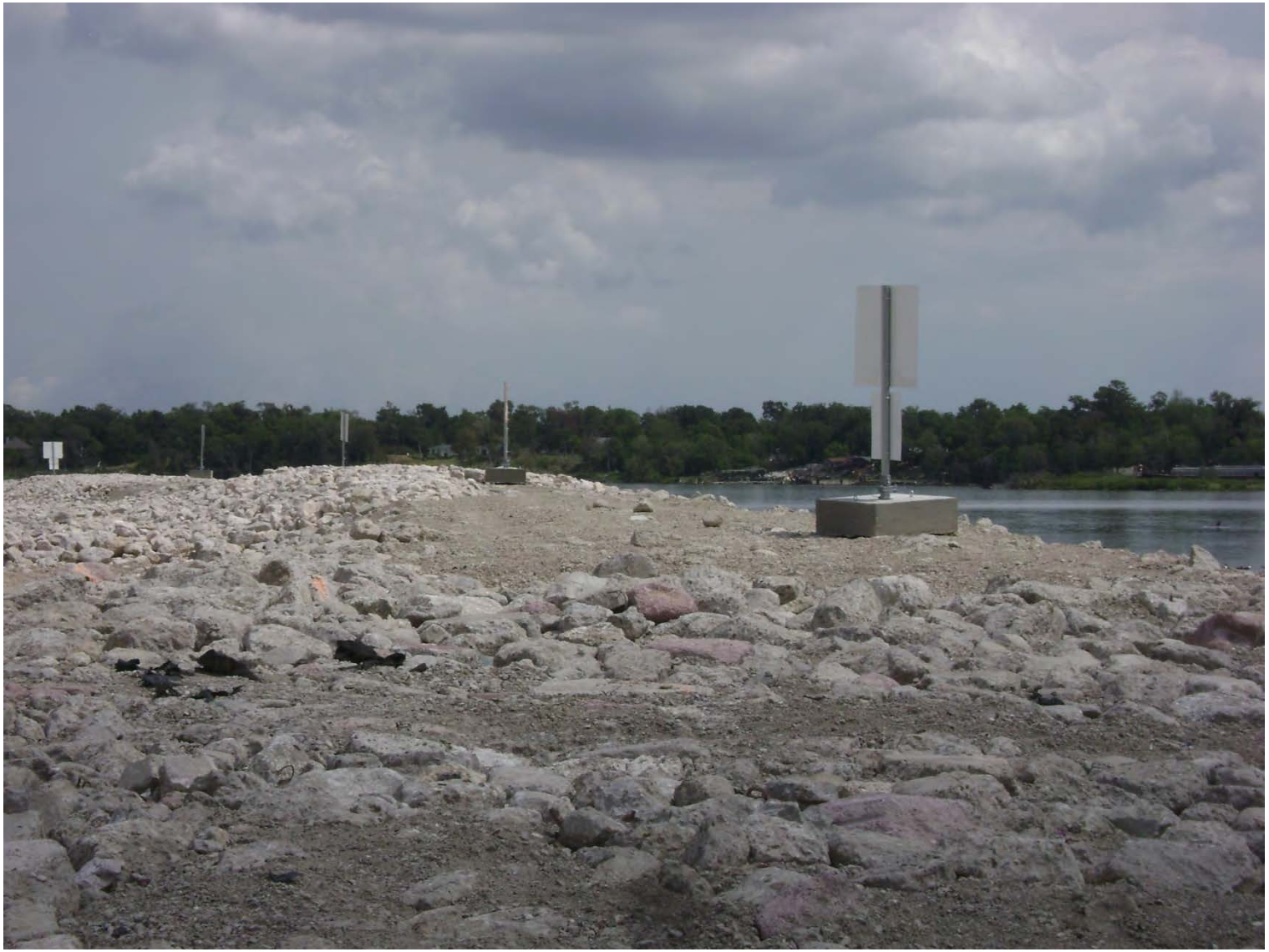
Final layer of geotextile before being covered with last layer of armor stone on the stockpile area. Looking north along the central berm. Note armor stone under geotextile fabric.



Final layer of armor stone placed over layer of geotextile. Looking north along central berm. Note reddish colored processed concrete aggregate.

Project completion photo from I-10 Bridge. Note reddish colored processed concrete aggregates in the stockpile area.

Project Completion Photo dated July 14, 2011 in the photo logs.



Project completion photo dated July 28, 2011 in the photo log. Note signage and reddish colored processed concrete aggregate along central berm with remnant geotextile from multiple laps for the 12 ounce geotextile underlayer, geomembrane, 16 ounce cushion layer and final layer of geotextile and armor stone.

Project Photo dated June 11, 2015. Note signage along central berm and reddish colored processed concrete aggregate.

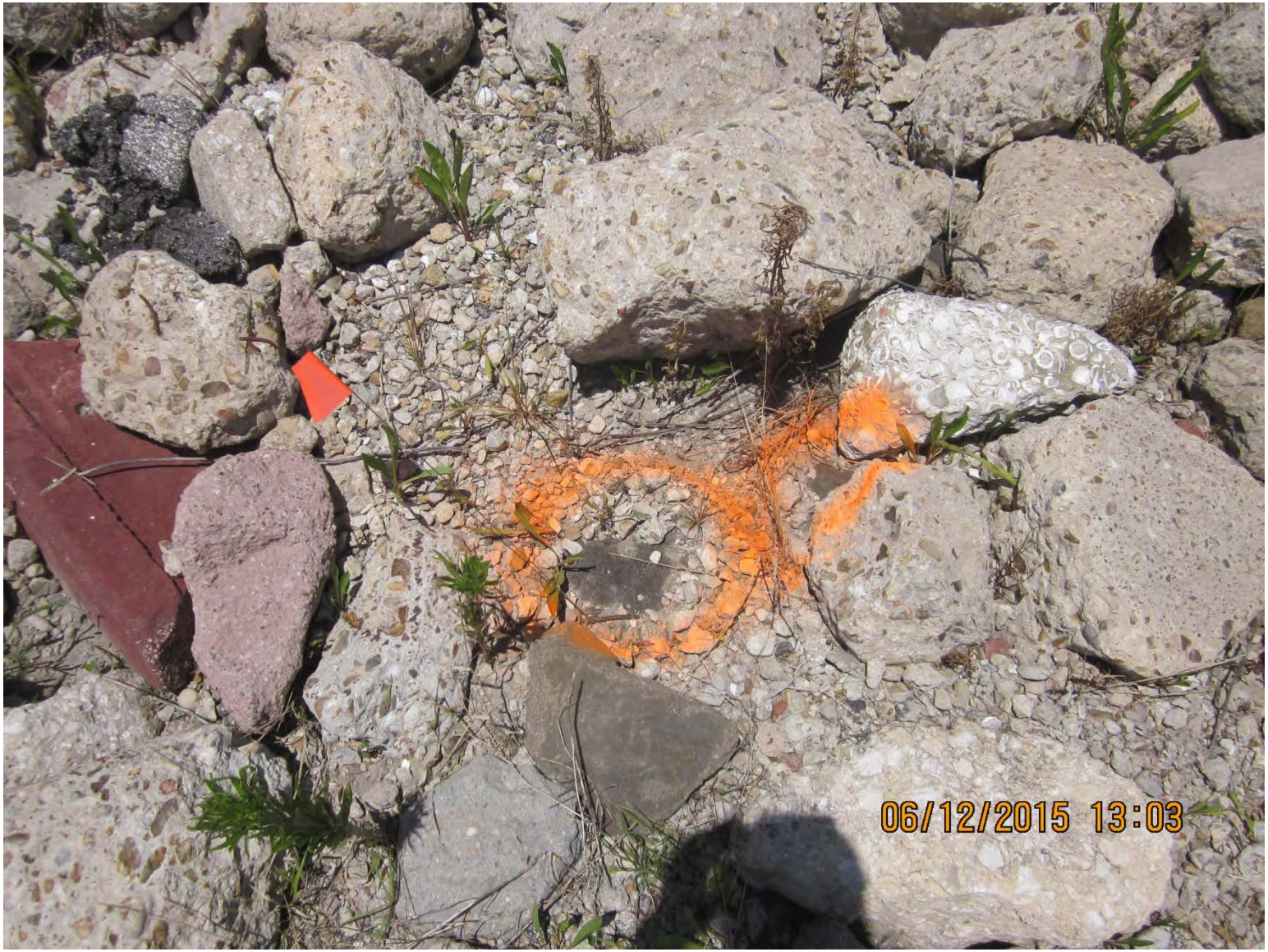


Photo of expose 3rd layer of geotextile atop the central berm stockpile area. Metal rod used to ping rock underneath.